



Pilots Responsibility With Operational Maintenance

YOUR RESPONSIBILITY FOR THE
MAINTENANCE OF YOUR AIRCRAFT



Airworthiness Certificate

- ▶ Your responsibilities for operating and maintaining your aircraft
- ▶ Difference between owning and operating/ renting
 - ▶ Definition of owner/operator:



Definition of Airworthy

- ▶ 14 CFR Part 3.5
- ▶ Aircraft conforms to its type design [or properly altered condition]
- ▶ Aircraft is in a condition for safe operation

Aircraft Certification Data Sheet

UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION—FEDERAL AVIATION ADMINISTRATION STANDARD AIRWORTHINESS CERTIFICATE			
1. NATIONALITY AND REGISTRATION MARKS	2. MANUFACTURER AND MODEL	3. AIRCRAFT SERIAL NUMBER	4. CATEGORY
5. AUTHORITY AND BASIS FOR ISSUANCE <p>This airworthiness certificate is issued pursuant to the Federal Aviation Act of 1958 and certifies that, as of the date of issuance, the aircraft to which issued has been inspected and found to conform to the type certificate therefor, to be in condition for safe operation, and has been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation, except as noted herein.</p> <p>Exceptions:</p>			
6. TERMS AND CONDITIONS <p>Unless sooner surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator, this airworthiness certificate is effective as long as the maintenance, preventative maintenance, and alterations are performed in accordance with Parts 21, 43, and 91 of the Federal Aviation Regulations, as appropriate, and the aircraft is registered in the United States.</p>			
DATE OF ISSUANCE	FAA REPRESENTATIVE	DESIGNATION NUMBER	
<small>Any alteration, reproduction, or misuse of this certificate may be punishable by a fine not exceeding \$1,000, or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE FEDERAL AVIATION REGULATIONS.</small>			
FAA Form 8100-2 (8-82)		U.S. GPO-2001 - 668-455	



Authority and Basis for Airworthiness Issuance

- ▶ This airworthiness certificate is issued pursuant to the Federal Aviation Act of 1958 and certifies that, as of the date of issuance, the aircraft to which issued has been inspected and found to conform to the type certificate therefore, to be in condition for safe operation, and has been shown to meet the requirement of the applicable comprehensive and detailed airworthiness code as provided in Annex 8 to the Convention of international Civil Aviation, except as noted herein. Exceptions:



Type certificate/Major Alteration



Airworthiness Certificate Reissuance



Rules for Maintenance

- ▶ Part 21
- ▶ Part 43
- ▶ Part 91



Airworthiness Certificate Terms and Conditions

- ▶ Unless sooner surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator, this airworthiness certificate is effective as long as the maintenance, preventive maintenance, and alterations are performed in accordance with Part 21, 43, and 91 of the Federal Aviation Regulations, as appropriate, and the aircraft is registered in the United States.



Registration

- ▶ Expires every 5 years
- ▶ Faa.gov check your status
- ▶ The status of your Airworthiness Certificate is the same as the status of your Registration



Registration reissuance

- ▶ Flyby wire, temporary registration they can fax you 90 day

Part 21

- ▶ Certification Procedures for products and Parts
 - ▶ Subpart B- Type Certificates
 - ▶ Lightsport and amateur built does not have a type certificate
 - ▶ Subpart E Supplemental Type Certificates
 - ▶ STC- approved data for an alteration
 - ▶ Subpart G Production certificates
 - ▶ Subpart H Airworthiness Certificate
 - ▶ Standard, normal, experimental
 - ▶ Subpart O TSO

Part 43

Maintenance, Preventive Maintenance, Rebuilding and Alteration.

- ▶ Section 43.5- Approval for Return to Service after Maintenance, Preventive Maintenance, Rebuilding and Alteration.
- ▶ Any time a maintenance function is performed (you change the oil or mechanic does an annual inspection) it must be approved for return to service
- ▶ Section 43.9- Content, Form and Disposition of Maintenance, Preventive Maintenance, Rebuilding and Alteration Records
- ▶ For return to service you need 4 things: Date, Description of work performed, Signature of person performing the work and their number



14 CFR Part 91

- ▶ General Operating and Flight Rules
- ▶ Subpart E- Maintenance, Preventive Maintenance and Alterations.

14 CFR Part 91, 91.403

- ▶ (a) The owner or operator of an aircraft is primarily responsible for maintaining that aircraft in an airworthy condition, including compliance with Part 39 of this chapter.
- ▶ Part 39-AD's

14 CFR Part 91, 91.405

Each owner or operator of an aircraft-

- ▶ (a) Shall have that aircraft inspected as prescribed in subpart E of this part
- ▶ (b) Shall ensure that maintenance personnel make appropriate entries in the aircraft maintenance records indication the aircraft has been approved for return to service

14 CFR Part 91, 91.407(a)

- ▶ No person may operate any aircraft that has undergone maintenance, preventive maintenance, rebuilding or alteration, unless-
- ▶ (1) It has been approved for return to service by a person authorized...
- ▶ (2) The maintenance record entry required by 43.9 or 43.11, as applicable, of this chapter has been made.



Responsibility of the FAA

- ▶ Find and fix unsafe conditions in the aviation industry
 - ▶ Traceability- how can they fix something if they don't know about it
 - ▶ Maintenance records are vital
 - ▶ Faa investigates accidents to prevent future accidents

14 CFR Part 91, 91.409

- ▶ (a) Except as provided in paragraph (c) of this section, no person may operate an aircraft unless, within the preceding 12 months, it has had
 - ▶ (1) An annual inspection in accordance with part 43 of this chapter...
 - ▶ (2) An inspection for the issuance of an airworthiness certificate in accordance with part 21 of this chapter.



Additional Part 91 Rules

- ▶ 91.411 Altimeter system and altitude reporting equipment tests and inspection.
- ▶ 91.413 ATC transponder tests and inspection.
- ▶ 91.415 Changes to aircraft inspection programs.
- ▶ 91.417 Maintenance records (retention).
- ▶ 91.419 Transfer of maintenance records.
- ▶ 91.421 Rebuilt engine maintenance records.

14 CFR Part 39

- ▶ Airworthiness Directives
- ▶ 39.7- What is the legal effect of failing to comply with an airworthiness directives?
 - ▶ Anyone who operates a product that does not meet the requirements of an applicable airworthiness directive is in violation of this section.



Ferry Permit

- ▶ When are they required?
- ▶ How do you obtain a ferry permit?



FAA and the Rules

- ▶ The Insurance companies and the lawyers put the teeth in the rules
- ▶ If something happens and plane isn't in annual... what is the insurance company going to do?



TSO's and PMA's

- ▶ Technical Standard Order
 - ▶ Data/Specifications
- ▶ Parts Manufacturing Approval
 - ▶ Direct replacement part
 - ▶ Specific to aircraft make and model
 - ▶ Will be accompanied by an Approved Model Listing(AML)

Installation of TSO'd parts

- ▶ If the installation of a TSO'd part is a major alteration it will require approved data
- ▶ If the installation of a TSO'd part is a minor alteration it can be installed with a log book entry
- ▶ How do you know if the installation is a major or minor?
 - ▶ Ask your mechanic- if he/she is not sure, have them call your local FAA FSDO



Questions for you

- ▶ Why do we have the FAR's
 - ▶ To protect you from yourself.
- ▶ What are the FAR's?
 - ▶ 100 years of lessons learned.
- ▶ Learn form the mistakes of others, you will not live long enough to learn them all yourself.



Issues with engine

- ▶ Engine doesn't shut down clean
- ▶ Primer takes several pumps to build up pressure